

AMENDMENT(S) TO THE SPECIFICATION

¶ 13: Both the ink-jet pens 10 and 42 (Fig. 2) and the carriage PCA 34 contain sensitive electronic components that are susceptible to permanent damage from ESD from the pens 10 and 42 or any object during their insertion into the carriage 30. This ESD can reach levels of about 15kV and higher. User insertion of a pen, such as the pen 10, into the carriage of the printer is regularly required when an empty pen is replaced. The user will often build up a static charge in his or her body walking across carpet which is transmitted to the pen 10 while it is held in his or her hand. Subsequent ESD can damage the pen 10 before it is ever inserted into the printer carriage 30. However, an even more costly event can occur if the ESD that occurs during insertion of either pen 10 or pen 42 damages an electronic component such as integrated circuit (IC) on the carriage PCA 34 in the printer that is connected directly to the conductive dimples 24 on the carriage connection ~~flex cable 24~~ flex cable 26. Therefore the carriage connection ~~flex cable 24~~ flex cable 26 has a pair of ears or extended portions 26a and 26b (Fig. 3) which are folded over and are angled rearwardly inside the chute 28. The flex cable 26 overlaps the three side walls of the carriage 30 as illustrated in Fig. 2. The extended portions 26a and 26b have conductive traces 61 and 62 (Fig. 3) which are forwardly exposed when the carriage connection ~~flex cable 24~~ flex cable 26 is mounted in the carriage 30.

¶ 15: The carriage connection ~~flex cable 24~~ flex cable 26 may be made of KAPTON® polyamide or other suitable plastic film 64 with conductive traces 66 delineated thereon. The carriage connection flex cable is actually a flexible printed circuit (FPC). The traces 66 connect the raised sets of dimples 24 to a plurality of parallel conductors 68 that mate with the connector 33. The traces 61 and 62 that shunt ESD from the pens 10 and 42 to ground also lead to corresponding ones of the conductors 68. As the pens 10 and 42 are inserted, the corresponding extended portions 26a and 26b fold back rearwardly, allowing the conductive contacts 20 on the pens to mate with their corresponding conductive dimples 24. Each pen housing 12 physically contacts one of the extended portions 26a and 26b during an initial phase of insertion and folds them back. The resiliency of the carriage connection flex cable 26 results in the extended portions 26a and 26b springing back into their unfolded positions illustrated in Fig. 2 when the pens 10 and 42 are removed. This puts the extended portions 26a and 26b back into position to intercept any ESD from the next set of pens that are

installed and shunt the same to ground. Of course it will be understood that usually only one pen is installed at a time since the ink stored in each of the pens 10 and 42 will typically be exhausted at different times. Moreover other objects may be inserted into the chute 28 such as a user's index finger and the extended portions 26a and 26b should extend a substantial distance in order to ensure that the objects are intercepted and any ESD shunted to ground.